CITY OF MILPITAS
MEMORANDUM

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DATE: October 1, 2003

TO: Mike McNeely, City Engineer

THROUGH: Darryl Wong, Utility Engineer

FROM: Elizabeth Koo, Administrative Analyst

SUBJECT: **Odor Discussion**

INTRODUCTION. The City Council has requested staff schedule a public hearing to receive information on odors within the City, and provide a history on the Newby Island composting facility. The hearing has been scheduled for October 7, 2003.

This memorandum provides a history of key events for the Newby Island compost facility. It also provides some background on the local odor control regulatory process, summarizes potential local odor sources, and provides some information on recent odor complaints received by staff.

NEWBY ISLAND COMPOST FACILITY HISTORY. Exhibit 1 chronologically summarizes major events associated with the Newby Island compost facility. The City of Milpitas filed a formal protest, and lawsuit against the City of San Jose to prevent the installation. San Jose and Milpitas agreed to a settlement that required submittal of an odor study of composting operations which started in 1994. The odor study, completed and accepted in 1996, concluded that odor can be controlled by implementing best management practices.

LOCAL ODOR CONTROL REGULATION. The Bay Area Air Quality Management District (BAAQMD) is responsible for regulation of San Francisco bay area air pollutant emissions, including all odor emissions except those generated from solid waste composting facilities. By the 1989 California Integrated Waste Management Act, Enforcement Agencies (EAs) are charged with monitoring and enforcing odor emission controls from these facilities. The State reimburses odor enforcement program improvement costs. The EA for San Jose area is the City of San Jose, Code Enforcement Division.

As of April 4, 2003, rules adopted by the California Integrated Waste Management Board require all compost facilities to complete an odor minimization plan. Under this requirement, compost handling operations and facilities must prepare, implement and maintain a site specific odor impact minimization plan including an odor monitoring protocol, description of meteorological conditions affecting migration of odors, and a complaint response procedure. The EA determines if the minimization plan is being followed and may issue a Notice and Order if necessary to require compliance. If odors

persist, a Notice and Order requiring additional measures to minimize odors may be issued.

Staff has invited representatives from Facilities 1 through 6 to the October 7th hearing. Exhibit 2 is a partial list of odor complaints based upon Utility Engineering records of public calls (staff refers callers to the Bay Area Air Quality Management District). Complaints included observations of bad, rotten, unpleasant, burning tire smell, foul and petro-chemical smells, among others.

Exhibits: Exhibit 1 - Newby Island Compost Facility Chronological History
Exhibit 2 - Partial List of Odor Complaints
Exhibit 3 - Potential Local Sources
Exhibit 4 - Bay Area Air Quality Management District Odor Pamphlet

cc: Thomas Wilson, City Manager
Utility Engineering - 30.10.30

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Exhibit 1 – Newby Island Compost Facility Chronological History: Key Events

TIME PERIOD	EVENT
5/21/93	City of San Jose circulates Negative Declaration for the addition of a green waste composting facility at Newby Island.
6/15/93	Milpitas City Council directs staff to file protest of Negative Declaration. Protest requests preparation of a focused Environmental Impact Report (EIR).
7/14/93	San Jose Planning Commission upholds the adoption of the Negative Declaration. Council Member Lawson attends meeting and addresses Commission.
7/21/93	Milpitas appeals Planning Commission adoption of Negative Declaration to S.J. City Council.
7/24/93	San Jose City Council upholds Planning Commission adoption of Negative Declaration.
7/27/93	Milpitas sends letter to California Integrated Waste Management Board expressing concern about permit issuance for composting facility.
9/10/93	Milpitas files suit against City of San Jose with BFI as a party in interest. Suit maintains focused EIR is needed for composting facility.
1/11/94	Milpitas agrees to settle lawsuit. Settlement agreement requires a study, at BFI's cost, on odor potential from facility. BFI must also notify City in future of any significant operational changes or permit revisions. Recommendations of studies to be considered and incorporated into permitted facility operations to the extent of the agreement obligations between BFI and San Jose are not materially affected.
5/94	Newby Island compost facility begins operations.
10/10/94	Settlement agreement executed by BFI, Milpitas and San Jose.
2/23/96	E & A Environmental Consultants, Inc. completes odor study for BFI as required by settlement agreement. Found that odors can be controlled with best management practices: **1)** Processing all yard waste the day of the receipt. **2)** Maintaining optimum moisture and oxygen content. **3)** Collecting and analysis of process controls. **4)** Turning windrows only during favorable meteorological conditions.
9/30/00	Operations Management Plan prepared by GeoFIRM for BFI. Includes proposal to relocate composting operation and use additional composting measures such as the Aerated Static Piles and In-Vessel techniques. In-Vessel technique used for significant malodorous emissions from potential high odor material.
6/1/02	BFI relocates compost operation to new location one mile away from former site. BFI to use composting techniques (aerated static piles and in-vessel technique) to reduce potential for odor migration.
9/23/02	City receives BFI letter that confirms that the composting pile was relocated and that the Aerated Static Piles and In-Vessel techniques were implemented.
4/4/03	California Integrated Waste Management Board regulations adopted requiring odor impact minimization plans be developed and submitted to Enforcement Agencies by compost facilities. Compost Facility has awarded a contract to a consultant firm to develop their plan.

Exhibit 2 – Partial List of City of Milpitas Odor Incidents Received by Utility Engineering in 2003

DATE	COMPLAINT
1/6/03	Resident e-mailed a concern about an "increasingly vile smell coming from the Newby Island dump."
1/28/03	Resident e-mailed a concern about a "bad smell at night in Milpitas."
2/20/03	Resident e-mailed a concern about a "rotting smell" and requested information for a school report.
5/30/03	Citizen left message with the City Manager's office expressing displeasure with a "strong unpleasant odor in Milpitas (which he) attributed to the dump."
7/18 & 25/03	Resident voiced odor complaints on two different occasions.
7/22/03	Resident called to express "extreme discomfort" from odors.
7/31/03	Resident e-mailed *The Milpitas Post* with concern of a "terrible burning tire smell."
7/31/03	Resident voiced public health concerns as it relates to the air quality in Milpitas.
8/4/03	Resident e-mailed message that he has been "smelling the dump for the last month."
8/15/03	Dixon Landing resident stated she couldn't sell home due to ongoing odor problem.
9/11/03	Resident called concerned about the "foul odor in Milpitas" that prevents her from taking a deep breath.
9/12/03	Resident left voice message stating, "the smell in Milpitas is intolerable."
9/13/03	Resident on N. Abbott noted that "the air has a petrol-chemical smell."
9/15/03	Resident called concerned about "smell coming from the dump, it has never been this bad."
9/18/03	Resident e-mailed inquiry if studies have been performed regarding odor.
9/22/03	(3) Separate residents voiced odor concerns.
9/30/03	Resident on Dixon Landing Road called to report an "unpleasant, burning smell."

POTENTIAL LOCAL ODOR SOURCES. Staff has conducted a review of potential odor sources and have identified the following sites. Each location handles, treats, or uses some form of organic material which may result in some level of odor generation and emission.

1) **Newby Island Compost Facility.** This facility is located about one mile west of the City of Milpitas boundary at Dixon Landing Road. The facility, owned and operated by BFI, produces compost by aerobically decomposing green and other organic material over about a 90-day period. The operation consists of piling appropriately blended material in rows, and controlling conditions such a temperature and moisture to encourage bacterial action to break down solids to a stable material which may be used as a soil amendment. About 91,000 tons per year of material is produced matching the maximum amount permitted. The facility is also approved to produce food waste compost through a sealed, in-vessel process.

2) **Newby Island Landfill.** This landfill, also located about one mile west of the City of Milpitas near Dixon Landing Road, was constructed in the 1950's and has an estimated life until 2023. The facility covers approximately 350 acres and handles about 845,000 tons of material each year. Disposal is accomplished by filling cells with trash and covering with an inert material. Methane and other gases may be generated as a result of trash decomposition. Trash collected from Milpitas is disposed at this site.

3) **Zanker Road Landfill/Compost Facility.** This facility, located about 1.8 miles to the west of Milpitas, was constructed in 1985 and has an estimated life until 2023. The facility covers about 70 acres and handles about 300,000 tons of material each year. Food and other putrescible materials are not accepted. Disposal, like Newby Island, includes daily cover of trash cells. Each day about 100 tons of grass and leaves is composted. The windrows are watered and turned daily, and the compost process is completed in twelve weeks. The same company operates the neighboring facility, Zanker Materials Processing Facility, with similar landfill operations. This second site is 70 acres and also handles about 300,000 tons of material each year. There is no composting processing at the second site.

4) **San Jose Water Pollution Control Plant.** This plant treats sewage for an area covering 300 square miles. Service areas includes Milpitas, Santa Clara County Sanitation Districts 2 & 3, San Jose, Cupertino Sanitation District, Sunol Sanitation District, Burbank Sanitation District, Campbell, Saratoga, Monte Soreno and Los Gatos. Separated sewage solids are digested in sealed tanks to a stable material over 30 days before being allowed to air dry for collection and transport off site. Another process includes aerobic digestion for 30 days, followed by a 2-year lagoon detention period and then air-drying in beds. Some material is stockpiled on site. Odors may be generated in the

sewage treatment and solids handling processes. Odor controls include the use of chemicals such as chlorine and hydrogen peroxide.

5) **Cargill Salt.** Cargill produces commercial salt by evaporating San Francisco Bay brine in a series of drying ponds. An odor event occurred from August 20 -29, 2002 when a transfer pump failed resulting in exposure and decomposition of pond bottom organic material. The Bay Area Air Quality Management District issued public nuisance citations for September 11 & 12, 2002.

6) **Calpine - Los Esteros Power Plant.** This plant generates electricity through natural gas powered turbines. The plant is located about 1/2 mile to the west of North McCarthy Boulevard. Combustion byproduct emissions may be emitted from the operation of power plants. It is our understanding from the California Energy Commission that natural gas powered plants such as this do not generate odor.

7) **San Francisco Bay and Creeks.** Natural decomposition of organic material may occur within the San Francisco bay lands west of Milpitas through organic material decomposition and algae blooms. High salt-water content mixed with algae, bacteria, plankton, and mud create a mixture known as brine. During atmospheric conditions involving windy conditions, sediment matter may be churned to the top of the water and odors released. Such events are more likely to occur during the spring and/or fall.